IN THE CLAIMS:

A status of all the claims of the present Application is presented below:

1. (Canceled)

2. (Currently amended) The method according to claim [[1]] 6, wherein synchronizing a fan commutation event further comprises:

comparing a phase of the periodic signal with a phase of the fan commutation event; and

phase-locking the periodic signal to the phase of the fan commutation event.

3. (Currently amended) The method according to claim [[1]] 6, wherein generating a constant frequency periodic signal further comprises generating at least one of a sinusoidal voltage and current.

4. (Currently amended) The method according to claim [[1]] 6, further comprising:

identifying a phase lag of the fan commutation event with respect to a phase of the periodic signal; and

increasing an amplitude of the periodic signal.

5. (Currently amended) The method according to claim [[1]] 6, further comprising:

identifying a phase lead of the fan commutation event with respect to a phase of the periodic signal; and

decreasing an amplitude of the periodic signal.

6. (Currently amended) ~~The method according to claim 1,~~ A method for reducing commutation-related acoustic noise in a fan system, comprising:

generating a constant frequency periodic signal; and

synchronizing a fan commutation event with a zero level value of the constant frequency periodic signal, and wherein synchronizing [[a]] the fan commutation event further comprises comparing the zero level value of the periodic signal with a tachometer signal indicating onset of the fan commutation event.

7. (Currently amended) The method according to claim [[1]] 6, further comprising deriving the frequency of the periodic signal from a speed input signal.

8. (Original) The method according to claim 7, wherein deriving the frequency further comprises deriving the frequency of the periodic signal from the speed input signal comprising a voltage signal indicating a temperature.

9. (Currently amended) The method according to claim [[1]] 6, wherein generating a constant frequency periodic signal further comprises generating a pulse width modulated rectified sinusoidal signal.

10. (Original) The method according to claim 9, wherein generating a constant frequency periodic signal further comprises deriving a sample frequency of the periodic signal from the speed input.

11. (Currently amended) A system for controlling a direct current fan motor, comprising:

a signal generator adapted to produce a periodic signal of a constant frequency; and

a phase-locked loop comprising a phase comparator configured to compare a phase of the periodic signal to a phase of a commutation event of the fan, the phase-locked loop adapted to synchronize a zero level value of the periodic signal with [[a]] the commutation event of the fan and phase-lock the periodic signal to the phase of the commutation event.

12. (Currently amended) The system according to claim 11, wherein the ~~phased-locked loop comprises a~~ phase comparator is adapted to generate an error signal indicative of a phase offset between the periodic signal and the commutation event.

13. (Original) The system according to claim 12, wherein the phase-locked loop further comprises a multiplier, the multiplier adapted to amplitude modulate the periodic signal in response to an error signal.

14. (Original) The system according to claim 13, wherein the fan is commutated with the amplitude modulated periodic signal.

15. (Currently amended) The system according to claim [[10]] 11, wherein the signal generator further comprises a sinusoidal voltage generator adapted to produce a rectified sinusoidal voltage.

16. (Original) The system according to claim 15, wherein the frequency of the sinusoidal voltage is dependent on a speed input supplied to the system.

17. (Original) The system according to claim 11, wherein the signal generator further comprises a pulse width modulation generator.

18. (Original) The system according to claim 11, wherein the signal generator further comprises a pulse width modulation generator adapted to generate a rectified pulse width modulated sinusoidal signal of a pre-defined number of samples.

19. (Original) The system according to claim 18, wherein each sample respectively comprises a plurality of pulse width modulated pulses of a common duty cycle.

20. (Original) The system according to claim 11, wherein the phase-locked loop is adapted to amplitude modulate the periodic signal based on a phase offset between the periodic signal and the commutation event.

21. (Original) The system according to claim 11, wherein the signal generator further comprises a pulse width modulated generator adapted to produce a rectified sinusoidal signal comprising a predefined number of samples.

22. (Original) The system according to claim 21, wherein each sample has a respective plurality of pulse width modulated pulses of a common duty cycle.

23. (Original) The system according to claim 22, wherein the phase-locked loop is adapted to synchronize the periodic signal with the commutation event by varying the duty cycles of the pulses in accordance with a phase offset between the periodic signal and the commutation event.

24. (Canceled)

25. (Currently amended) ~~The computer-readable medium according to claim 24,~~ A computer-readable medium having stored thereon an instruction set to be executed, the instruction set, when executed by a processor, causes the processor to perform a computer method of:

generating a periodic signal of a constant frequency; and

synchronizing a fan commutation event with a zero level value of the periodic signal, and wherein synchronizing [[a]] the fan commutation event further comprises:

comparing a phase of the periodic signal with a phase of the fan commutation event; and

phase-locking the periodic signal to the phase of the fan commutation event.

26. (Currently amended) The computer-readable medium according to claim [[24]] 25, wherein synchronizing [[a]] the fan commutation event further comprises comparing the zero level value of the periodic signal with a tachometer signal indicating onset of the fan commutation event.

27. (New) A method for controlling a fan, comprising:

generating a constant frequency periodic signal, the frequency of the periodic signal derived from a speed input signal comprising a voltage signal indicating a temperature; and

synchronizing a fan commutation event with a zero level value of the constant frequency periodic signal.

28. (New) The method of claim 27, further comprising:

comparing a phase of the periodic signal with a phase of the fan commutation event; and

phase-locking the periodic signal to the phase of the fan commutation event

29. (New) The method of claim 27, further comprising:

identifying a phase lag of the fan commutation event with respect to the phase of the periodic signal; and

increasing an amplitude of the periodic signal.

30. (New) The method of claim 27, wherein generating the constant frequency periodic signal comprises generating a pulse width modulated rectified sinusoidal signal.

31. (New) The method of claim 27, wherein generating the constant frequency periodic signal comprises generating at least one of a sinusoidal voltage and current.

32. (New) The method of claim 27, further comprising:

identifying a phase lead of the fan commutation event with respect to the phase of the periodic signal; and

decreasing an amplitude of the periodic signal.